

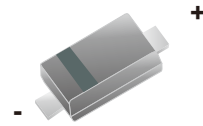
## 1SS400-HF

**Reverse Voltage: 90 V**

**Rectifying Current: 100 mA**

**RoHS Device**

**Halogen Free**



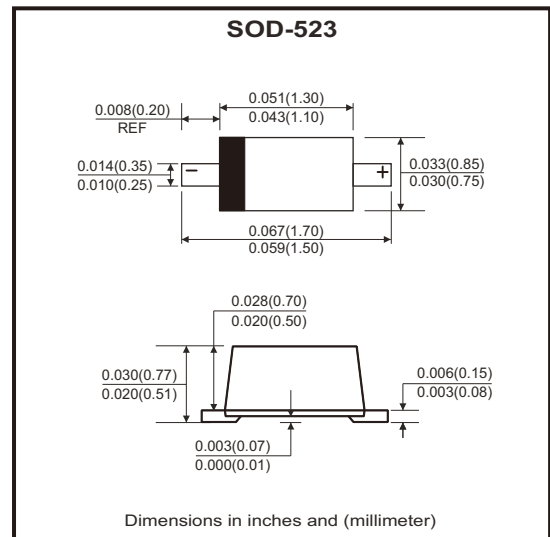
### Features

- High speed.
- Small surface mounting type.
- High reliability with high surge current handling capability.

### Mechanical data

- Case: SOD-523 standard package, Molded Plastic.
- Mounting position: Any

### Circuit Diagram



### Maximum Ratings (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter                                                    | Symbol          | 1SS400-HF  | Unit                 |
|--------------------------------------------------------------|-----------------|------------|----------------------|
| Non-repetitive peak reverse voltage                          | $V_{RM}$        | 90         | V                    |
| DC blocking voltage                                          | $V_R$           | 80         | V                    |
| Forward continuous current                                   | $I_{FM}$        | 225        | mA                   |
| Average rectified output current                             | $I_o$           | 100        | mA                   |
| Non-repetitive peak forward surge current @ $t=8.3\text{ms}$ | $I_{FSM}$       | 2          | A                    |
| Power dissipation                                            | $P_D$           | 150        | mW                   |
| Thermal resistance junction to ambient                       | $R_{\theta JA}$ | 833        | $^{\circ}\text{C/W}$ |
| Junction temperature                                         | $T_J$           | 150        | $^{\circ}\text{C}$   |
| Storage temperature range                                    | $T_{STG}$       | -55 ~ +150 | $^{\circ}\text{C}$   |

### Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter                     | Symbol   | Conditions                                            | Min. | Typ. | Max. | Unit          |
|-------------------------------|----------|-------------------------------------------------------|------|------|------|---------------|
| Forward voltage               | $V_F$    | $I_F=100\text{mA}$                                    |      |      | 1.2  | V             |
| Reverse current               | $I_R$    | $V_R=80\text{V}$                                      |      |      | 0.1  | $\mu\text{A}$ |
| Capacitance between terminals | $C_T$    | $V_R=0.5\text{V}$ , $f=1.0\text{MHz}$                 |      |      | 3.0  | pF            |
| Reverse recovery time         | $t_{rr}$ | $V_R=6\text{V}$ , $I_F=10\text{mA}$ , $R_L=100\Omega$ |      |      | 4.0  | nS            |

## Rating and Characteristic Curves (1SS400-HF)

Fig.1 - Forward Characteristics

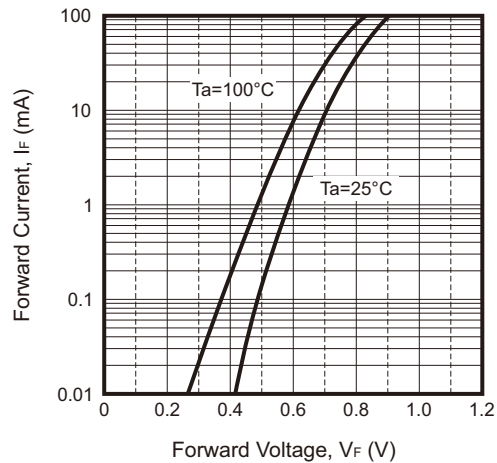


Fig.2 - Reverse Characteristics

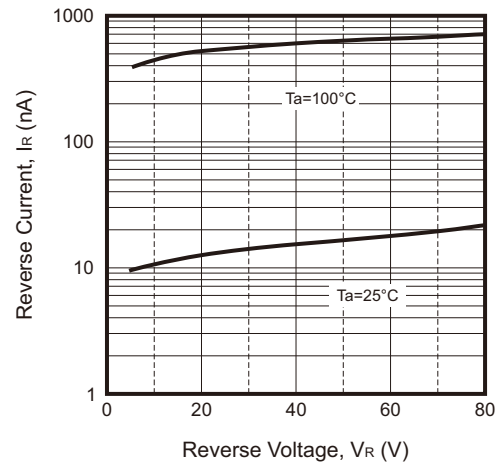


Fig.3 - Capacitance Characteristics

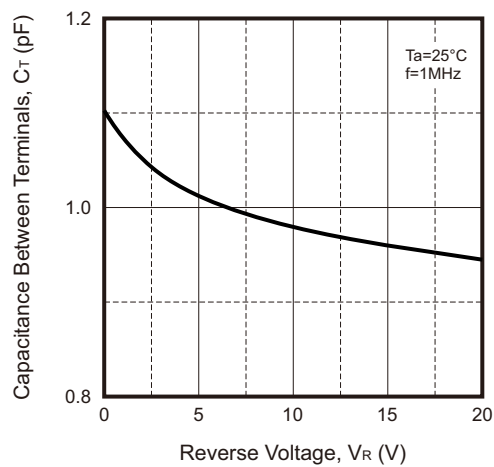
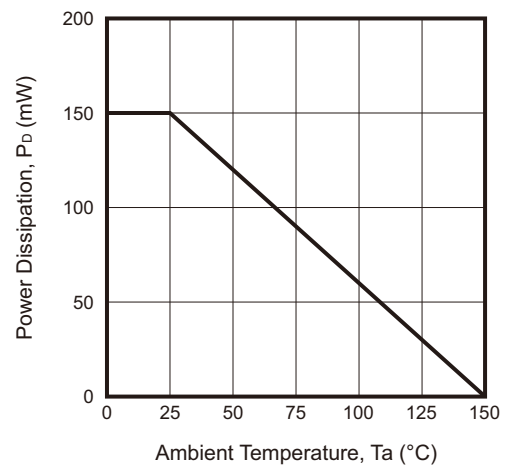
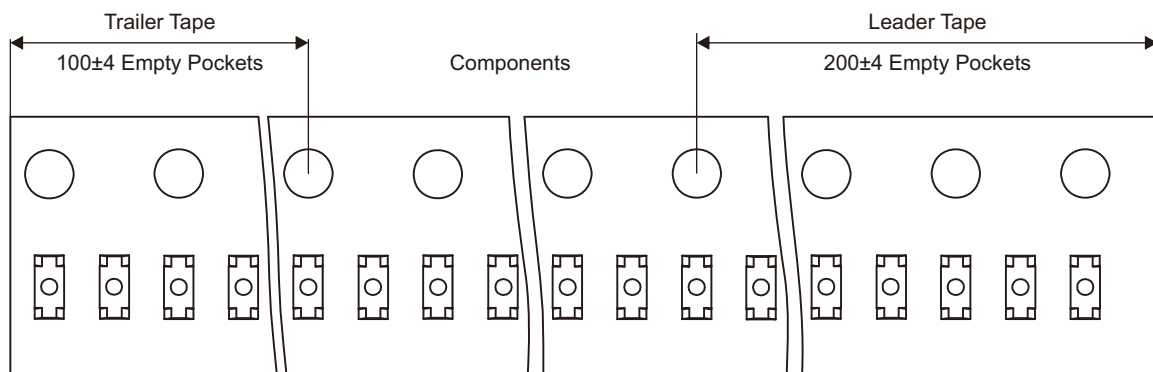
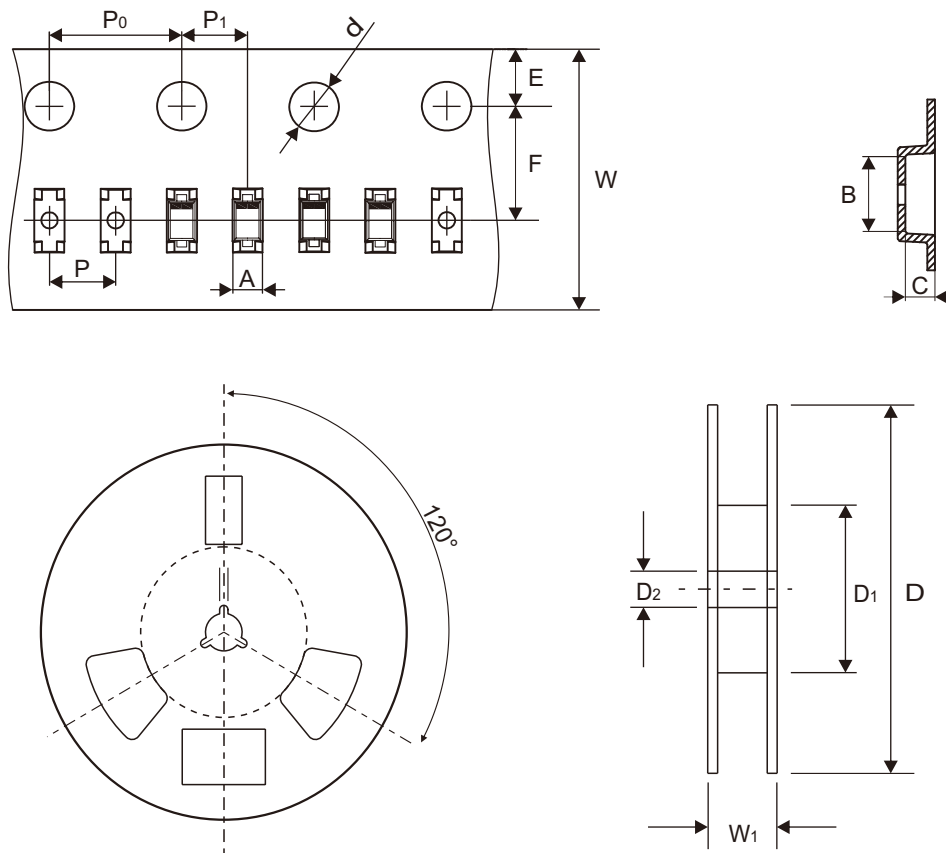


Fig.4 - Power Derating Curve



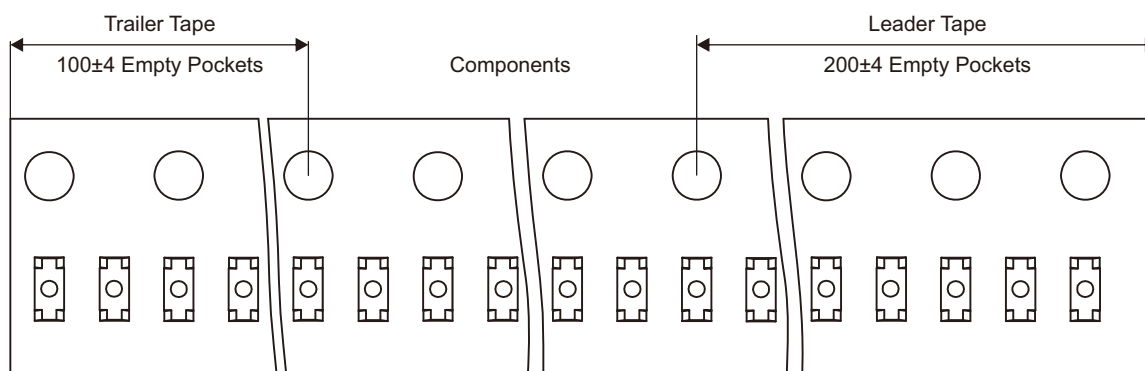
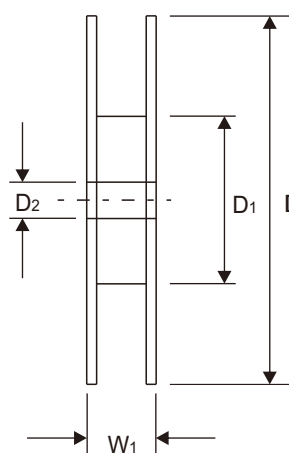
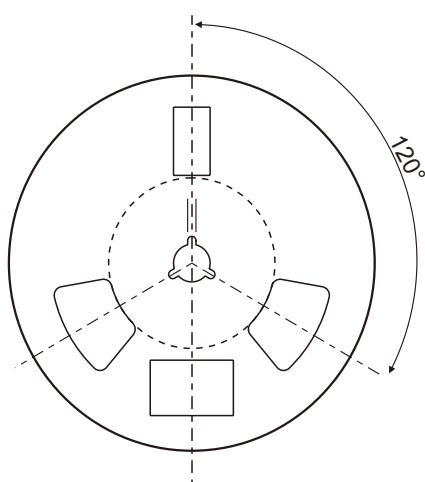
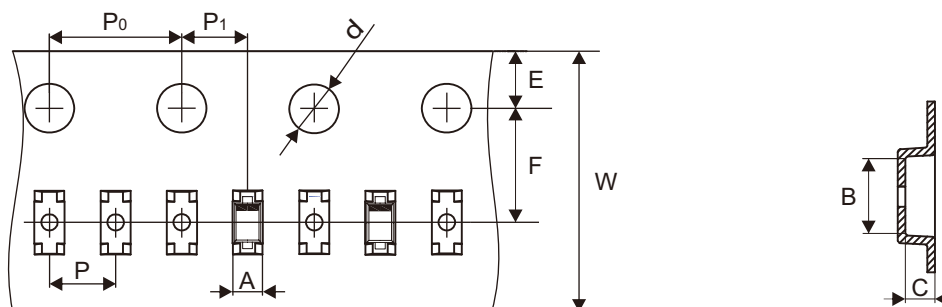
## Reel Taping Specification (For 1SS400-F-HF)



| SOD-523 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $0.90 \pm 0.05$   | $1.94 \pm 0.05$   | $0.73 \pm 0.05$   | $1.50 \pm 0.10$   | $178 \pm 2.00$    | $54.40 \pm 1.00$  | $13.00 \pm 1.00$  |
|         | (inch) | $0.035 \pm 0.002$ | $0.076 \pm 0.002$ | $0.029 \pm 0.002$ | $0.059 \pm 0.004$ | $7.008 \pm 0.079$ | $2.142 \pm 0.039$ | $0.512 \pm 0.039$ |

| SOD-523 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                         | W1                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $2.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $12.30 \pm 1.00$  |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.079 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

## Reel Taping Specification (For 1SS400-H-HF)



| SOD-523 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $0.90 \pm 0.05$   | $1.94 \pm 0.05$   | $0.73 \pm 0.05$   | $1.50 \pm 0.10$   | $178 \pm 2.00$    | $54.40 \pm 1.00$  | $13.00 \pm 1.00$  |
|         | (inch) | $0.035 \pm 0.002$ | $0.076 \pm 0.002$ | $0.029 \pm 0.002$ | $0.059 \pm 0.004$ | $7.008 \pm 0.079$ | $2.142 \pm 0.039$ | $0.512 \pm 0.039$ |

| SOD-523 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                         | W1                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $2.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $12.30 \pm 1.00$  |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.079 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| 1SS400-F-HF | A            |
| 1SS400-H-HF |              |

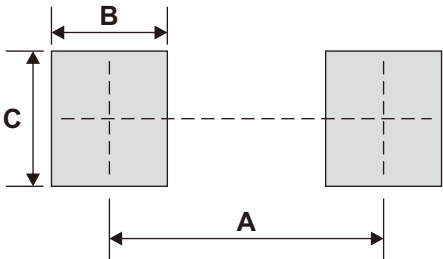


Solid dot = Halogen Free

■ = Cathode band

## Suggested P.C.B. PAD Layout

| SIZE | SOD-523 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 1.42    | 0.056  |
| B    | 0.60    | 0.024  |
| C    | 0.70    | 0.028  |



Note: 1. The pad layout is for reference purposes only.

## Standard Packaging

| Case Type |             | REEL PACK  |                  |
|-----------|-------------|------------|------------------|
|           |             | REEL (pcs) | Reel Size (inch) |
| SOD-523   | 1SS400-F-HF | 8,000      | 7                |
|           | 1SS400-H-HF | 3,000      |                  |